Practice abstract #4.13

ORPHAN CROPS & PLANT-BASED SPREADS





AUTHOR(S)

Tamara Dapčević Hadnađev
Milica Pojić
Jelena Tomić
Anamarija Mandić

CONTACT

tamara.dapcevic@fins.uns.ac.rs
milica.pojic@fins.uns.ac.rs
jelena.tomic@fins.uns.ac.rs
anamarija.mandic@fins.uns.ac.rs

KEY WORDS

Faba bean, Lupin, Vegetable Spread

www.cropdiva.eu
@H2020Cropdiva

CHALLENGE

The growing demand for plant-based foods focuses on major crops like chickpea, while orphan crops such as lupin and faba bean remain underused. Despite offering nutritional and environmental benefits, these legumes are rarely used in spreads due to concerns about antinutritional compounds, off-flavors, and inconsistent processing performance.

SOLUTION

CROPDIVA developed and tested plant-based spreads using faba bean and lupin. Antinutritional factors—vicine and convicine in faba bean, and alkaloids in lupin—were minimized by avoiding cooking water during preparation. Beany flavor was balanced with spices such as black pepper, garlic, and lemon juice. To address varietal texture differences, oil content was adjusted for optimal spreadability.

OUTCOME

The new spreads showed comparable spreadability and better storage stability than chickpea-based ones. Consumer testing revealed positive acceptance of taste and texture. When informed about the role of orphan crops in sustainability, consumers were more willing to include the spreads in their diets.

PRACTICAL RECOMMENDATIONS

Food producers can confidently integrate lupin and faba bean in plant-based spreads by applying simple technological adaptations: exclude cooking water to reduce antinutrients, use natural flavor enhancers to mitigate beany notes, and tune oil content to ensure consistency across bean varieties. Communication of the sustainability value of these crops can further improve consumer acceptance and market potential.



FURTHER INFORMATION

Knowledge about these innovative spreads was shared with the public during the EU Kitchen event at the International Agricultural Fair in Novi Sad.

About CROPDIVA

CROPDIVA wants to put 6 underused arable crops back in the fields: oats, hull-less barley for human consumption, triticale, buckwheat, faba beans and lupins. 27 European partners are joining forces to enhance agrobiodiversity in Europe. They will achieve this by focusing on crop diversity and creating local value chains. The project is running from September 2021 to August 2025.

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement N°1010000847

Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Manje zastupljene biljne vrste i biljni namazi

IZAZOV

Sve veća potražnja za biljnom hranom usmerena je na glavne useve poput leblebije, dok se vredni „zaboravljeni“ usevi poput lupine i boba nedovoljno koriste. Iako imaju značajne nutritivne i ekološke prednosti, ove mahunarke se retko koriste u namazima zbog prisustva antinutrijenata, nepoželjne arome i varijabilnih performansi tokom tehnološke obrade.

REŠENJE

CROPDIVA je razvila i testirala biljne namaze sa bobom i lupinom kao glavnim sastojcima. Antinutritivne supstance — vicin i konvicin u bobu, kao i alkaloidi u lupini — uspešno su smanjene izbegavanjem korišćenja vode od kuvanja tokom pripreme. Karakterističan ukus „na mahunarke“ ublažen je začinima kao što su crni biber i beli luk i limunov sok. Takođe, sadržaj ulja je podešen kako bi se umanjile razlike u teksturi zrna različitih sorti i obezbedila optimalna mazivost.

REZULTATI

Novi namazi su pokazali sličnu mazivost i bolju stabilnost tokom skladištenja u odnosu na proizvode na bazi leblebije. Potrošački testovi pokazali su pozitivne reakcije na ukus i teksturu. Nakon što su upoznati sa značajem „zaboravljenih“ useva za održivost proizvodnje hrane, potrošači su izrazili veću spremnost da ove namaze uvrste u svoju ishranu.

PRAKTIČNE PREPORUKE

Proizvođači mogu sa sigurnošću uključiti lupinu i bob u biljne namaze koristeći jednostavna tehnološka prilagođavanja formulacije: izbegavanje vode od kuvanja radi smanjenja antinutritivnih supstanci, upotrebu prirodnih začina za ublažavanje „mahunastog“ ukusa i podešavanje sadržaja ulja radi konzistentnosti između sorti. Isticanje održivosti ovih useva može dodatno povećati prihvatljivost kod potrošača i tržišni potencijal.

DODATNE INFORMACIJE

Znanje o ovim inovativnim namazima podeljeno je sa javnošću tokom događaja EU Kuhinja na Međunarodnom poljoprivrednom sajmu u Novom Sadu.